

### AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of graphical block diagram modeling, comprising:

providing a plurality of graphical blocks interconnected to form a graphical subsystem, said graphical subsystem represented as a graphical subsystem block in a graphical block diagram model;

constructing a graphical class instance of a graphical class that corresponds to the graphical subsystem block for use in a said graphical block diagram model of a user;

~~enabling a change~~ changing to a value of a parameter of a selected one of the plurality of graphical blocks interconnected to form the graphical subsystem block, said changing occurring in response to a user selection ~~to be made by the user;~~ and

constructing from the graphical class instance and the changed value a graphical subclass instance that inherits structure from the graphical class, said structure reflecting the structure indicated in the graphical class at the time of the constructing.

2. (Currently Amended) The method of claim 1, ~~wherein~~ further enabling comprises

providing to the user a user interface having a dialog box corresponding to the selected one of the plurality of graphical blocks, said user interface to accepting ~~input from the user for any a parameter that can be~~ changed.

3. (Currently Amended) The method of claim 1, further comprising:

storing data associated with the changed parameter in a data structure as subclass data, the subclass data in the data structure defining a subclass from which the graphical subclass instance is instantiated.

4. (Currently Amended) The method of claim 3, further comprising:

wherein the subclass data includes at least one of a relative path to the graphical subsystem block, a name of the parameter and the changed value.

5. (Currently Amended) The method of claim 1, further comprising:

merging the graphical subclass instance with the graphical class, said merging performing one of propagating the changed parameter to the graphical class and re-instantiating an instance of the graphical class in place of the graphical subclass instance.

6. (Original) The method of claim 1, further comprising:

associating a visual cue with the graphical subclass instance to allow the user to distinguish the graphical subclass instance from the graphical class instance.

7. (Original) The method of claim 6, wherein the user is provided a display of the selected graphical block that has a title, and further wherein associating comprises modifying the title to indicate to the user that a graphical subclass instance has been constructed for the selected block.

8. (Currently Amended) The method of claim 6, wherein the user is provided with a display of the graphical block diagram model that includes the graphical subsystem block, and further wherein associating comprises modifying the display to indicate to the user that a graphical subclass instance has been constructed for the selected block.

9. (Currently Amended) The method of claim 10~~1~~, wherein the structure comprises connectivity and layout information.

10. (Original) A method of graphical block diagram modeling, comprising:

providing a class library comprising graphical classes defined in terms of graphical subsystem blocks, the subsystem blocks comprising sub-blocks; and

creating a graphical subclass of a selected one of the graphical classes by modifying a sub-block parameter that is not a top level parameter of the selected class, wherein the subclass inherits subsequent changes to the graphical class.

11. (Currently Amended) A computer program product residing on a computer-readable medium for graphical block diagram modeling, the computer program comprising instructions causing a computer to:

provide a plurality of graphical blocks interconnected to form a graphical subsystem, said graphical subsystem represented as a graphical subsystem block in a graphical block diagram model;

construct a graphical class instance of a graphical class that corresponds to the graphical subsystem block for use in ~~a~~ said graphical block diagram model ~~of a user;~~

~~enable a change to a value of a parameter of one of the~~ plurality of graphical blocks to be made by the user interconnected to form the graphical subsystem block, said changing occurring in response to a selection by the user; and

construct from the graphical class instance and the changed value a graphical subclass instance that inherits structure from the graphical class, said structure reflecting the structure indicated in the graphical class at the time of the constructing.

12. (Currently Amended) A computer system comprising:

means for providing graphical blocks interconnected to form a graphical subsystem block in a block diagram;

means for constructing a graphical class instance of a graphical class that corresponds to the graphical subsystem block for use in ~~a~~ said graphical block diagram model ~~of a user;~~

means for enabling a change to a value of a parameter of a selected one of the graphical blocks interconnected to form said graphical subsystem block, said change to be made by the a user; and

means for constructing from the graphical class instance and the change a graphical subclass instance that inherits structure from the graphical class.

13. (Original) A computer system comprising:

means for providing a class library comprising graphical classes defined in terms of graphical subsystem blocks, the subsystem blocks comprising sub-blocks; and

means for creating a graphical subclass of a selected one of the graphical classes by modifying a sub-block parameter that is not a top level parameter of the selected class, wherein the subclass inherits subsequent changes to the graphical class.

14. (New) The medium of claim 11, wherein the instructions further cause the computer to:

provide to the user a user interface having a dialog box corresponding to the selected one of the graphical blocks interconnected to form the graphical block subsystem, said user interface accepting input from the user for a parameter being changed.

15. (New) The medium of claim 11, wherein the instructions further cause the computer to:

store data associated with the changed parameter in a data structure as subclass data, the subclass data in the data structure defining a subclass from which the graphical subclass instance is instantiated.

16. (New) The medium of claim 15, wherein the subclass data includes at least one of a relative path to the graphical subsystem block, a name of the parameter and the changed value.

17. (New) The method of claim 11, wherein the instructions further cause the computer to:

merge the graphical subclass instance with the graphical class, said merge performing one of propagating the changed parameter to the graphical class and re-instantiating an instance of the graphical class as the graphical subclass instance.

18. (New) The medium of claim 11, wherein the instructions further cause the computer to:

associate a visual cue with the graphical subclass instance to allow the user to distinguish the graphical subclass instance from the graphical class instance.

19. (New) The medium of claim 18, wherein the user is provided a display of the selected graphical block that has a title, and the associating comprises modifying the title to indicate to the user that a graphical subclass instance has been constructed for the selected block.

20. (New) The medium of claim 18, wherein the user is provided with a display of the graphical block diagram model that includes the graphical subsystem block, and the associating comprises modifying the display to indicate to the user that a graphical subclass instance has been constructed for the selected block.